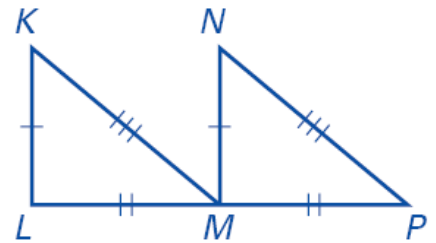


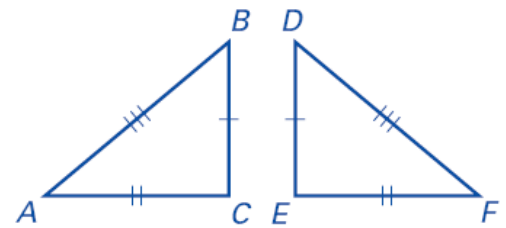
Geometry      Date \_\_\_\_\_      4.3 Notes  
Proving Triangles Congruent (pp 212-215)

SSS Postulate:

1. Example. Prove  $\triangle KLM \cong \triangle NMP$



2. Guided Practice. Prove  $\triangle ABC \cong \triangle FDE$

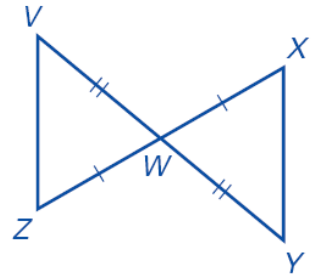


Geometry      Date \_\_\_\_\_      4.3 Notes  
Proving Triangles Congruent (pp 212-215)

Included Angle:

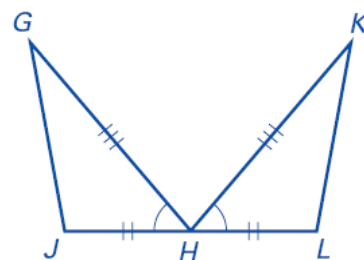
SAS Postulate

3. Example. Prove:  $\triangle VWZ \cong \triangle YWX$



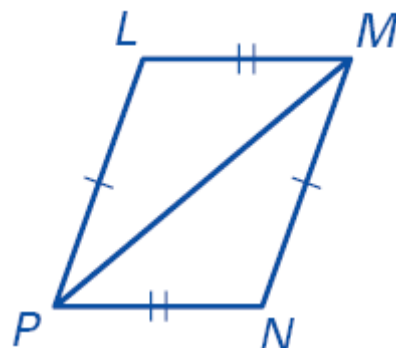
Geometry Date \_\_\_\_\_ 4.3 Notes  
Proving Triangles Congruent (pp 212-215)

4. Guided Practice. Prove  $\triangle GHJ \cong \triangle KHL$



Examples.

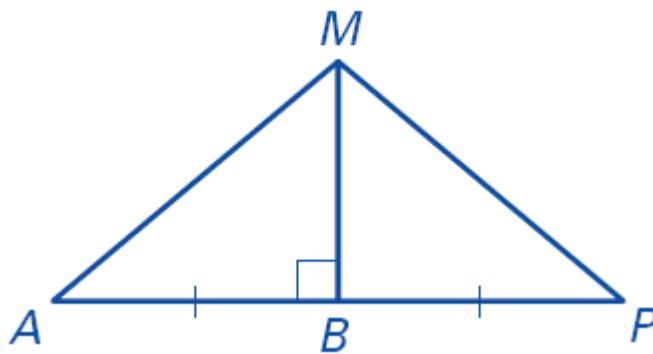
5. Is there enough information to prove  $\triangle LMP \cong \triangle NPM$  ?



6. Complete the proof.

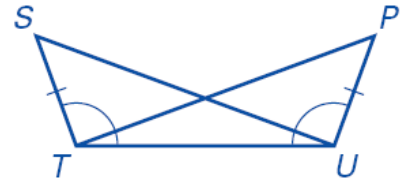
Given:  $\overline{AB} \cong \overline{PB}$   
 $\overline{MB} \perp \overline{AP}$

Prove:  $\triangle MBA \cong \triangle MBP$



Geometry      Date \_\_\_\_\_      4.3 Notes  
Proving Triangles Congruent (pp 212-215)

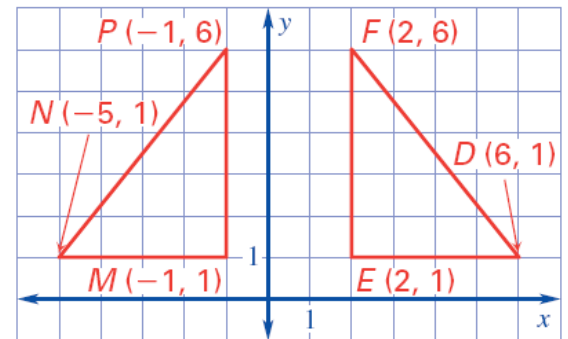
7. **Guided Practice:** Is there enough information to prove that  $\triangle STU \cong \triangle PUT$ ?



**Examples.**

8. A picture frame is assembled with a diagonal brace along the back. Explain why the frame with a brace is more stable than a frame without the brace.

9. Use the SSS postulate to show that  $\triangle NPM \cong \triangle DFE$ .



**Guided Practice.**

10. Explain why the crossed legs of a picnic table give it more support than if the legs go straight down, as in a dinner table.

Geometry      Date \_\_\_\_\_      4.3 Notes  
Proving Triangles Congruent (pp 212-215)

11. \_\_\_\_\_ Multiple Choice. Which additional congruence is correct to prove  $\triangle ABD \cong \triangle CBD$ . State the postulate you would use.

- A.  $\overline{AB} \cong \overline{BC}$  by SAS
- B.  $\overline{AD} \cong \overline{DC}$  by SAS
- C.  $\overline{AB} \cong \overline{BC}$  by SSS
- D.  $\overline{AD} \cong \overline{DC}$  by SSS

12. Sketch a triangle and label its vertices. Name two sides and the included angle between the sides.

13. Henry believes he can use the information given in the diagram and the SAS Congruence Postulate to prove the two triangles are congruent. Explain Henry's mistake.

